

*Archimedes said: Give me a lever big enough and a fulcrum on which to place it and I shall move the world.*

# QUALITY MANAGEMENT



## TOOLS AND TECHNIQUES

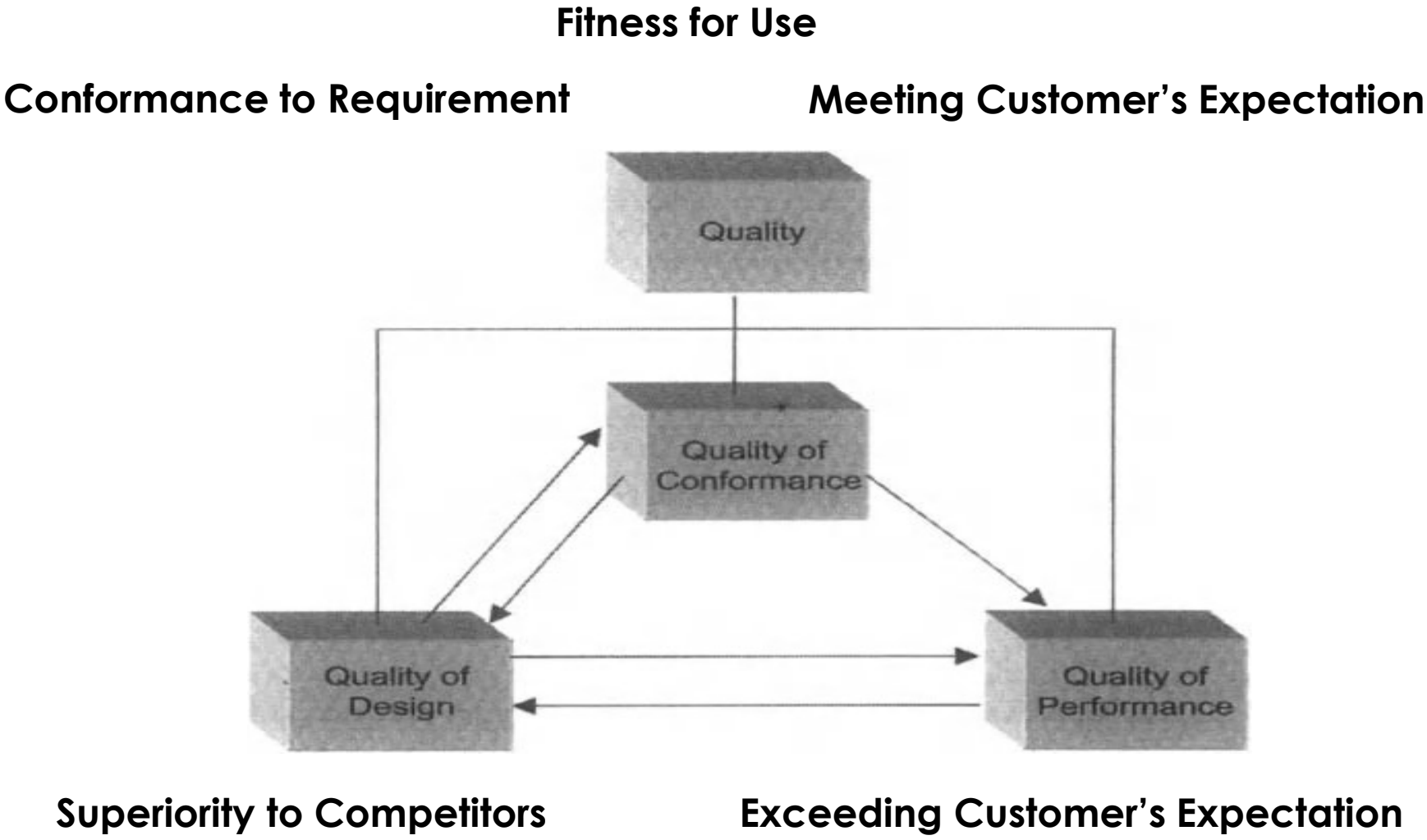
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JANKECH QUALITY SERVICES

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  - Is – Is not Matrix
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  - AND
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- **Mega Tools**
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# Quality – definitions



# Quality – grouping characteristics



## Structural

Strength of beam

Density of material

Length or width of part

Weight of can

## Sensory

Taste

Fragrance

Aesthetics

Responsiveness

## Time – bound

Reliability

Maintainability

Warranty

Durability

## Ethical

Responsiveness

Courtesy

Communication

Honesty

# Drivers of Quality

- **Customers** : meeting and exceeding the requirements of the customer is the sole duty of a business. *How can this be achieved?*
- **Product/Service**: production of products and services that conform to pre – stipulated standard drives quality.  
**Employee Satisfaction**: Very essential. *How does it drive quality?*
- **Competitors**: *How do we leverage on competition to drive excellence?*

• All the “HOWs” to be treated completely.





# Tools & Techniques

# Tools



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- Cause and Effect Diagram
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- Pareto Chart
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- Flowchart
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- **Management and Planning Tools**

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- RCA
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- **Mega Tools**

- TQM
- QFD
- ISO 9000



# Problem – solving Tools and Techniques



- Finding effective solutions to business problems is the principal difference between highly profitable organizations and struggling ones
- Using proven tools and techniques in problem identification and description; solution determination and implementation; evaluation and standardization ensures systematic improvement.
- When a customer issues are sorted out, he is happy and willing to return.
- When customers are overtly satisfied they become the none - salaried sales team
- There are several tools and techniques for identifying, prioritizing, solving and evaluating the effectiveness of solution to business problems

*HOW DO I MAKE MY  
CUSTOMERS MY  
UNSALARIED STAFF?*



# Most Problem Solving Tools & Techniques Focus on



Understanding the relationship between independent variables and the dependent variable.



Identifying the vital few independent variables that effect the dependent variable.



Optimizing the independent variables so as to control our dependent variable(s).



Monitoring the optimized independent variable(s).



*There are many examples to describe dependent and independent relationships*



We describe this concept in terms of the equation: Often referred to as a transfer function



$$Y = f(X_i)$$



**TECHNIQUES**

# Cause and Effect Diagram

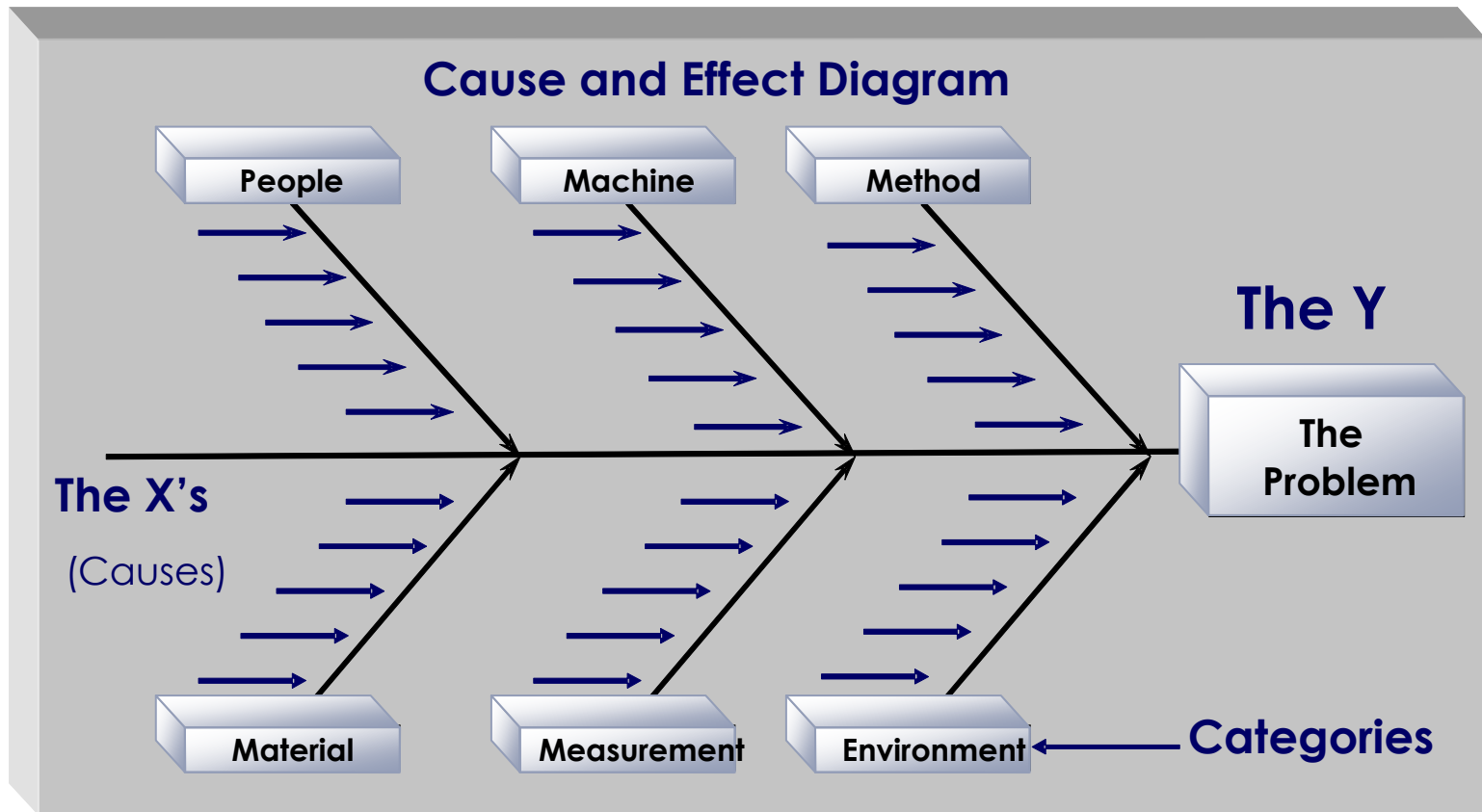


- This tool was made popular by Kaoru Ishikawa who used it to assess the likelihood of all potential factors that can be the cause of the problem causing the problem.
- It is also called Ishikawa Diagram after the inventor or Fish bone diagram because of its shape.
- It is a tool for both expansion and focusing, brainstorming is a very important tool in cause and effect diagram

## **WHEN TO USE**

- When identifying possible causes of a problem, for example :
  - customer attrition
  - Production of defective products
  - Dwindling market shares
  - Transactional losses etc.

*We utilize Brainstorming techniques to populate a Cause and Effect Diagram seeking ALL possible causes for our issue of concern.*

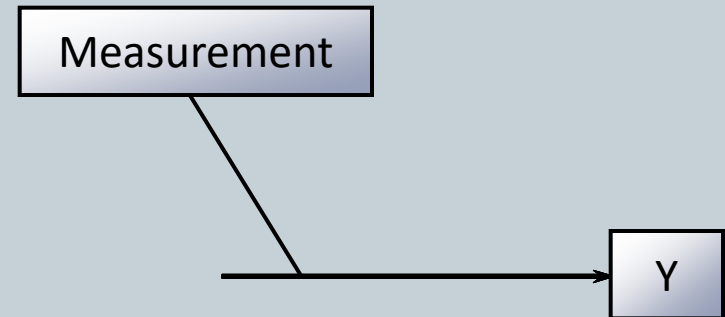


# Cause and Effect Diagram

The **Measurement** category groups Root Causes related to the measurement and measuring of a process activity or output:

Examples of questions to ask:

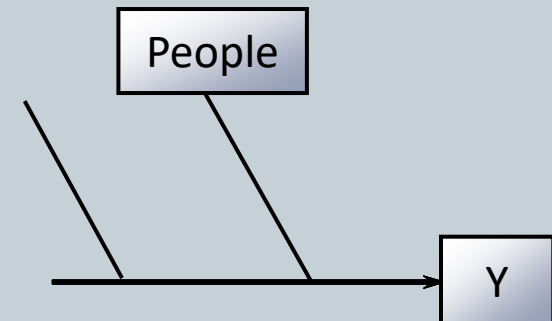
- Is there a metric issue?
- Is there a valid measurement system? Is the data good enough?
- Is data readily available?



**People** category groups Root Causes related to people, staffing and Organizational structure:

Examples of questions to ask:

- Are people trained, do they have the right skills?
- Is there person to person variation?
- Are people over-worked, under-worked?





## ***AND MANY MORE TOOLS***

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